

GIS for the LEA

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Why GIS?

- Organized Data Collection
- Accurate
- Timesaving
- Model and Map the World
- Uncover Patterns, Relationships, and Trends
- Unlimited Application

Contents

- Equipment
- Visual Organization of Information
- Basic Steps
- Data Dictionary
- Differential Correction
- Editing Features
- Viewing Data
- Examples
- GIS Workgroups
- Agency-Wide Database
- Peripherals
- Results

Equipment

- Trimble GeoXT
- ARC GIS Software
 - ArcMap
 - Map Overlays
 - ArcCatalog
 - Organize Data, Projections, etc.
- GPS Pathfinder Office
 - Data Dictionaries
 - Differential Correction
 - Data Transfer



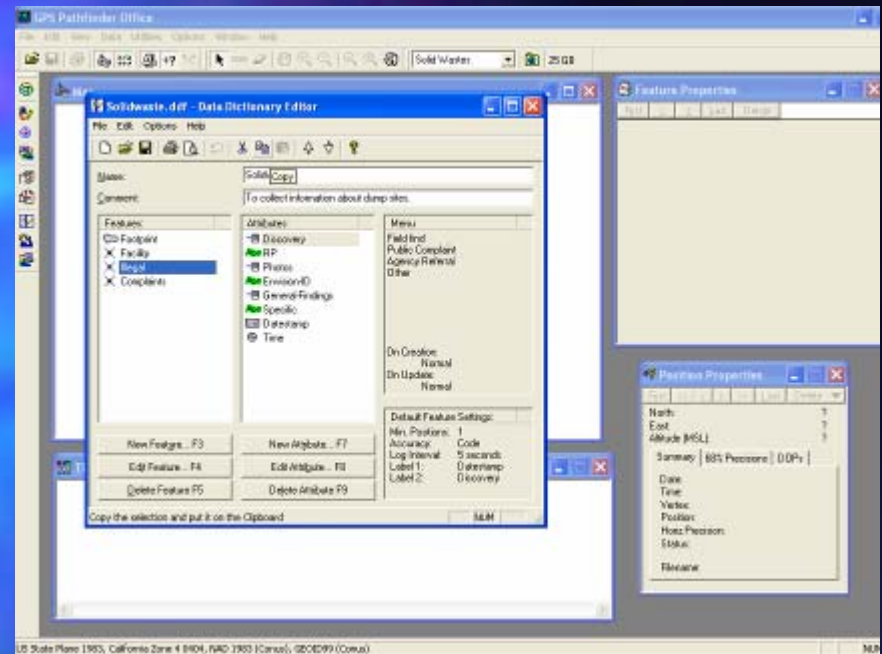
Visual Organization of Information

- Precise, More Precise, and Most Precise Information
- Facility Distribution
 - Landfills, Transfer Stations, Composters
 - Locations and Footprints
- Trends
 - Illegal Dumping
 - Events
 - Outreach and Public Education
- Land Use

Basic Steps

- Data Dictionary
- Data Collection
- Importing Data
- Differential Correction
- Editing Features
- Exporting Data
- Viewing Data

Data Dictionary



- Created with Pathfinder Office
- Menu for Data Collection
- Useful for Tables
- Choose Wisely

Differential Correction

- Enhances Data Quality and Integrity
- Two Main Methods
 - Real Time
 - Internet Post Processing
- Base Station – A Precisely Known Location
- Use Date and Time for Comparison
- Saves a Corrected File

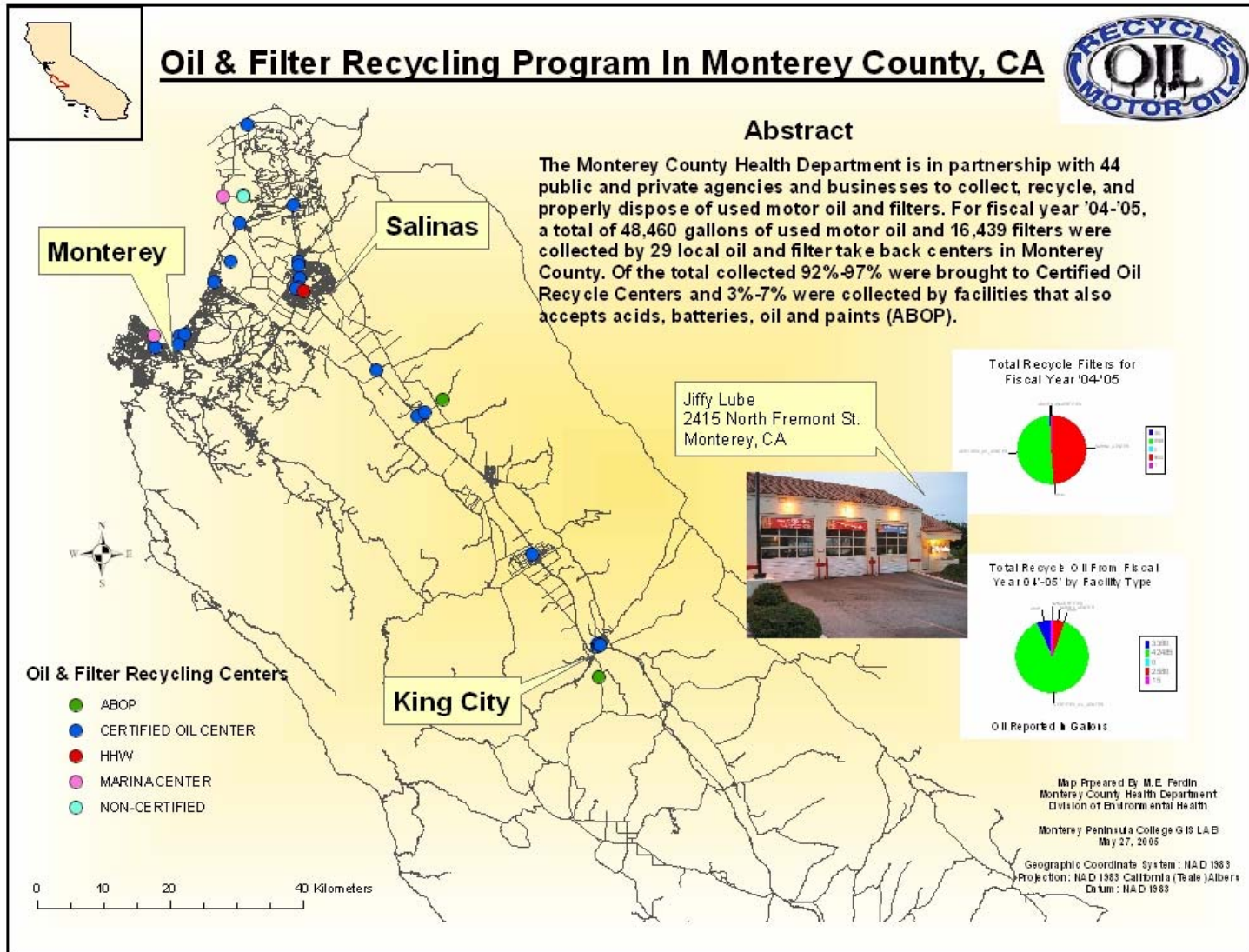
Editing Features

- "Clean up" Errant Points
 - Smoother Footprints
 - Removal of Extraneous Data
- Focus on Important Data Points

Viewing Data

- ArcMap Allows Map Overlay
- Map Points Are “Active”
- Where All The Work Pays Off
 - Draw Conclusions
 - Make Decisions
 - Get to Work

County Maps - Recycling



City Maps – Illegal Dumping



Parcel Maps - Complaint



Multi-User Projects

- Use Data From Multiple Groups:
Environmental Health, Code
Enforcement , etc.
 - Hazardous Materials
 - UST's, First Responder Incidents
 - Water Resources
 - Active and Abandoned Wells
 - Solid Waste
 - Illegal Dumpsites
 - Landfills

Multi-User Project – Fort Ord

Microsoft Excel - Ft_Ord_Parcls2.xls						
File Edit View Insert Format Tools Data Window Help						
Aerial 10 B I U \$ % , +0% -0%						
I22	X	✓	=			
KEY NO	COVERAGE	APN	OWNER	LAND-\$	IMP-\$	ACRES
1	PARTIAL	031201001000	USA	\$ -	\$ -	98.38
2	PARTIAL	031201006000	FORT ORD REUSE AUTHORITY	\$ -	\$ -	65.90
3	PARTIAL	031021037000		\$ -	\$ -	108.32
4	PARTIAL	031121002000	USA	\$ -	\$ -	223.13
5	PARTIAL	031121002000	USA	\$ -	\$ -	2.36
6	PARTIAL	032373009000	CHASE RICHARD G & HELGA E CHASE TRS	\$ 9,897	\$ 31,917	0.17
7	PARTIAL	032371084000	BAILEY THOMAS E & RENEE	\$ 86,281	\$ 127,697	0.24
8	PARTIAL	032373012000	MARINA WATER DIST	\$ -	\$ -	0.33
9	PARTIAL	031201001000	USA	\$ -	\$ -	1.13
10	COMPLETE	032371083000	HANCOCK WILLIE & DOROTHEA	\$ 80,529	\$ 138,049	0.15
11	COMPLETE	031201008000	USA	\$ -	\$ -	42.80
12	COMPLETE	031081005000	INTERIM INC	\$ 224,900	\$ 506,028	2.25
13	COMPLETE	031081012000	USA	\$ -	\$ -	2.16
14	COMPLETE	031081010000	PENINSULA OUTREACH WELCOME HOUSE THE	\$ 151,807	\$ 354,219	2.41
15	COMPLETE	031081013000	USA	\$ -	\$ -	4.36
16	COMPLETE	031081010000	PENINSULA OUTREACH WELCOME HOUSE THE	\$ 151,807	\$ 354,219	0.52
17	COMPLETE	031101032000	CALIFORNIA STATE UNIVERSITY TRUSTEES OF THE	\$ -	\$ -	1.75
18	PARTIAL	031101032000	CALIFORNIA STATE UNIVERSITY TRUSTEES OF THE	\$ -	\$ -	388.33
19	PARTIAL	031021038000	CITY OF MARINA	\$ -	\$ -	28.29
20	COMPLETE	031201010000	USA	\$ -	\$ -	34.16
21	COMPLETE	031081013000	USA	\$ -	\$ -	0.78
22	PARTIAL	031081017000		\$ -	\$ -	11.90
23	COMPLETE	031101016000	MONTEREY PENINSULA UNIFIED SCHOOL DIST	\$ -	\$ -	12.94
24	COMPLETE	031081017000		\$ -	\$ -	21.74
25	COMPLETE	031091003000	USA	\$ -	\$ -	7.61
26	COMPLETE	031091003000	USA	\$ -	\$ -	205.58
27	PARTIAL	031031013000	USA	\$ -	\$ -	67.81
28	COMPLETE	031081002000		\$ -	\$ -	8.05
29	COMPLETE	031081002000		\$ -	\$ -	108.77
30	COMPLETE	031101031000	USA	\$ -	\$ -	20.40
31	COMPLETE	031101018000	USA	\$ -	\$ -	45.50
32	COMPLETE	031101999000		\$ -	\$ -	3.87
33	COMPLETE	031031015000	USA	\$ -	\$ -	8.91
34	PARTIAL	031031014000	USA	\$ -	\$ -	8.04
35	PARTIAL	031101033000	CSUMB	\$ -	\$ -	18.66
36	PARTIAL	031101013000	GOLDEN GATE UNIVERSITY	\$ 337,351	\$ 224,900	7.18
37	PARTIAL	031101030000	TRUSTEES OF THE CALIFORNIA	\$ -	\$ -	7.29
38	PARTIAL	031101003000	TRUSTEES OF THE CALIFORNIA STATE UNIVERSITY	\$ -	\$ -	45.93
39	PARTIAL	031101022000	USA	\$ -	\$ -	117.09
40	PARTIAL	031101020000	FORT ORD	\$ -	\$ -	15.56
41	PARTIAL	031101021000	USA	\$ -	\$ -	23.74
42	PARTIAL	031101023000	USA	\$ -	\$ -	215.74
43						
44						

Multi-User Project – Fort Ord

FORT ORD LANDFILL - LOCATION



GIS Workgroups

- Meet With Other Like-Minded Individuals, Agencies
 - Public Works, Health Dept., Sheriff's Dept.
- Working Together Can Save Time and Money
- Easy to Set Up Training and Product Demonstrations
- You Are Not Alone

Agency-Wide Database

- Monterey County GeoDatabase
 - Monitored by Information Technology Department
 - Access Can Be Granted to View County Maps
 - Information May be Added if it Meets Sufficient Criteria
 - Eliminates Repetition

Peripherals

- Can Be Attached to Field Equipment and “Tag” Positional Data
 - Laser
 - More Accurate
 - Safer for the User
 - More Efficient
 - Reach everything in “plain view”
 - Water Sampling Equipment
 - Landfill Gas Monitors

Results

- Enforcement
- Information Sharing
- Informed Planning
- Improved Community Service
- Improved Defense of Public Health and the Environment
- A more effective LEA

Conclusion

- Decide if GIS is Worth the Investment
- Choose the Best Suited Equipment
- Plan Your Data Organization
- Use All Resources Available to You

Question and Answer

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